

9/757 227

WEST Search History

DATE: Tuesday, November 11, 2003

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=PGPB,JPAB,EPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR</i>			
L5	xml and xls and @pd<=20010110	1	L5
<i>DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR</i>			
L4	L3 not l2	11	L4
L3	xml and xls and @ad<=20010110	11	L3
L2	6615266.pn. or 6565609.pn. or 6622144.pn.	3	L2
L1	6564263.pn.	1	L1

END OF SEARCH HISTORY

9/757 227

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L2: Entry 2 of 3

File: USPT

Sep 2, 2003

US-PAT-NO: 6615266

DOCUMENT-IDENTIFIER: US 6615266 B1

TITLE: Internet computer system with methods for dynamic filtering of hypertext tags and content

DATE-ISSUED: September 2, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hoffman, Jr.; Gene	Emerald Hills	CA		
Elrod; Mark B.	Reno	NV		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Networks Associates Technology, Inc.	Santa Clara	CA				02

APPL-NO: 09/ 618224 [PALM]

DATE FILED: July 18, 2000

PARENT-CASE:

The present application is a continuation of commonly-owned patent application Ser. No. 08/815,164, filed Mar. 11, 1997 now U.S. Pat. No. 6,122,657 issued Sep. 19, 2000, which claims priority from commonly owned provisional patent application Ser. No. 60/037,161 filed Feb. 4, 1997, the disclosures of which are hereby incorporated by reference and the priority filing dates of which are claimed.

INT-CL: [07] G06 F 15/16

US-CL-ISSUED: 709/227; 705/513

US-CL-CURRENT: 709/227; 715/513

FIELD-OF-SEARCH: 709/201-203, 709/200, 709/206, 709/217, 709/212, 709/213, 709/227, 709/249, 707/513, 707/516, 707/530, 707/10, 707/3, 382/161

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISS DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	5572643	November 1996	Judson	
<input type="checkbox"/>	5594809	January 1997	Kopec et al.	382/161
<input type="checkbox"/>	5649186	July 1997	Ferguson et al.	707/10
<input type="checkbox"/>	5706507	January 1998	Schloss	
<input type="checkbox"/>	5708825	January 1998	Sotomayor	
<input type="checkbox"/>	5721827	February 1998	Logan et al.	709/217
<input type="checkbox"/>	5737619	April 1998	Judson	
<input type="checkbox"/>	5745909	April 1998	Perlman et al.	707/513
<input type="checkbox"/>	5757925	May 1998	Faybishenko	709/203
<input type="checkbox"/>	5802299	September 1998	Logan et al.	
<input type="checkbox"/>	5809250	September 1998	Kisor	709/227
<input type="checkbox"/>	5838906	November 1998	Doyle et al.	709/202
<input type="checkbox"/>	5845075	December 1998	Uhler et al.	
<input type="checkbox"/>	5864683	January 1999	Boebert et al.	709/249
<input type="checkbox"/>	5878219	March 1999	Vance, Jr. et al.	
<input type="checkbox"/>	5893127	April 1999	Tyan et al.	707/513
<input type="checkbox"/>	5937160	August 1999	Davis et al.	
<input type="checkbox"/>	5956484	September 1999	Rosenberg et al.	
<input type="checkbox"/>	5987480	November 1999	Donohue et al.	707/501
<input type="checkbox"/>	6009441	December 1999	Mathieu et al.	707/516
<input type="checkbox"/>	6041355	March 2000	Toga	709/227
<input type="checkbox"/>	6092091	July 2000	Sumita et al.	707/530

OTHER PUBLICATIONS

Netscape Browser Plug-in;
www.ncu.edu.tw/.about.center5/book/quebooks/netscap3/netch9.*
 Tim Balls, Java in the Computing Curriculum.
www.lmu.ac.uk/ies/comps/staff/iestjb/CTI-Java, Jan. 31, 1997.
 Axel Boldt, WebFilter, <http://math-www.uni-paderborn.de/.about.axel/NoShit/>, 1995.
 Henrik Frystyk Nielsen. Rule FILE FILTER, www.w3.org/library/user/using/Rules.html, Dec. 1996.
 JunkBuster Technical Information. www.junkbusters.com/ht/en/ijbman.html#java, 1996.
 Steve Grant, Web Filter, <http://ils.unc.edu/gants/report.html>, Apr. 10, 1995.
 Edith Au et al., Java Programming Basic, 1996.

ART-UNIT: 2142

PRIMARY-EXAMINER: Powell; Mark R.

ASSISTANT-EXAMINER: Vu; Thong

ATTY-AGENT-FIRM: Inouye; Patrick J. S. Hamaty; Christopher J.

ABSTRACT:

An Internet computer system with methods for dynamic filtering of hypertext tags and content is described. The system includes one or more Web clients, each operating a Web browser (e.g., Netscape Navigator or Microsoft Internet Explorer) with an

Internet connection to one or more Web servers. Each client includes, interposed between its browser and communication layer, a Filter module of the present invention which traps and processes all communications between the browser and the communication layer. The Filter module, which implements client-side methodology at each individual Web client for dynamic filtering of hypertext tags and content, includes an output stream, a processing loop, a Filter method, and an input stream. During system operation, the Web browser generates multiple requests for retrieving content. More particularly, particular content is retrieved by a fetch or GET command (e.g., using HTTP protocol) transmitted to a target server from the client-side communication layer (e.g., Winsock driver). The command is, however, trapped by the Filter module. The "real" request or command is at this point processed by the Filter method of the Filter module. Accordingly, the system can modify the command, delete the command, synthesize new commands, or pass through unchanged the existing command. In an exemplary embodiment, the Filter method provides handlers for specific processing of various HTML (Hypertext Markup Language) tags, all operating according to user-configurable filtering preferences.

21 Claims, 4 Drawing figures

91757-227

WEST



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L4: Entry 2 of 11

File: USPT

Sep 2, 2003

US-PAT-NO: 6613098

DOCUMENT-IDENTIFIER: US 6613098 B1

TITLE: Storage of application specific data in HTML

DATE-ISSUED: September 2, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sorge; Terri L.	Kirkland	WA		
Fischer; Kevin J.	Redmond	WA		
Timasheva; Anna V.	Bellevue	WA		
Johnson; Russell S.	Seattle	WA		
Misra; Rajeev S.	Redmond	WA		
Niemisto; Juha	Mercer Island	WA		
Coffen; Robert W.	Redmond	WA		
Natarajan; Ramakrishnan	Bellevue	WA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Microsoft Corporation	Redmond	WA			02

APPL-NO: 09/ 333815 [PALM]

DATE FILED: June 15, 1999

INT-CL: [07] G06 F 17/00

US-CL-ISSUED: 715/503; 715/504, 715/513, 715/522

US-CL-CURRENT: 715/503; 715/504, 715/513, 715/522

FIELD-OF-SEARCH: 715/513, 715/501.1, 715/503, 715/504, 715/522

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	5860073	January 1999	Ferrel et al.	715/522
<input type="checkbox"/>	6078924	June 2000	Ainsbury et al.	707/101
<input type="checkbox"/>	6182092	January 2001	Francis et al.	715/513
<input type="checkbox"/>	6230173	May 2001	Ferrel et al.	715/513
<input type="checkbox"/>	6396500	May 2002	Qureshi et al.	345/473
<input type="checkbox"/>	6456308	September 2002	Agranat et al.	345/854

OTHER PUBLICATIONS

"Microsoft Office Breaks Ground By Adopting HTML Standard as File Format" Dec. 15, 1997, <http://xml.coverpages.org/microsoftHTML971215.html>.
Moseley, Mastering Microsoft Office 97 Professional Edition, Second Edition, .COPYRGT. 1997, pp. 531, 1031-1041.*
Young, "Cascading Style Sheets in Internet Explorer 4," Oct. 15, 1997
<http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dnie40/html/css-ie4.asp>.
Radosevich, "XML runs for Office" Infoworld, v19, n48, Dec. 1 1997, pp 1,24.

ART-UNIT: 2176

PRIMARY-EXAMINER: Herndon; Heather R.

ASSISTANT-EXAMINER: Queler; Adam

ATTY-AGENT-FIRM: Anderson; Ronald M.

ABSTRACT:

A spreadsheet program saves data into a hypertext markup language (HTML) document that can be viewed with a browser program, but persists all of the information associated with that data necessary to maintain formatting and functionality of the data if reintroduced into the spreadsheet program. The HTML document can then be used both for displaying the data over the Internet or other network in a browser program, and also for opening the data in the spreadsheet program. The information necessary for preserving the format and functionality of the data in the spreadsheet program is incorporated into the HTML document using HTML, Cascading Style Sheets (CSS), and Extended Markup Language (XML). HTML is used for expressing cell data information that is displayed in the browser program, CSS are used for expressing cell-level properties of the data, and XML is used for expressing information that is not displayed in the browser program, but which is necessary for some functionality of the data when used in the spreadsheet program. If any formatting of the data are changed to enable display of the data in the browser program as displayed in the spreadsheet program, the original formatting information is retained in a supporting file that is ignored by a browser program.

36 Claims, 4 Drawing figures



Generate Collection

Print

L4: Entry 3 of 11

File: USPT

Jun 24, 2003

US-PAT-NO: 6584459
DOCUMENT-IDENTIFIER: US 6584459 B1

TITLE: Database extender for storing, querying, and retrieving structured documents

DATE-ISSUED: June 24, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chang; Daniel T.	San Jose	CA		
Cheng; Josephine M.	San Jose	CA		
Chow; Jyh-Herng	San Jose	CA		
Xu; Jian	San Jose	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
International Business Machines Corporation	Armonk	NY				02

APPL-NO: 09/ 325661 [PALM]

DATE FILED: June 2, 1999

PARENT-CASE:

This application claims priority from U.S. Provisional Application No. 60/103,501, entitled, "XML Extender And Index Structured Documents," filed on Oct. 08, 1998, by Chang et al., which is incorporated by reference herein. CROSS-REFERENCE TO RELATED APPLICATIONS The present application is related to the following applications, all filed on the same date as the present application, and commonly assigned with the present application. 1. Application Ser. No. 09/324,827, now U.S. Pat. No. 6,366,934 entitled "METHOD AND APPARATUS FOR QUERYING STRUCTURED DOCUMENTS USING A DATABASE EXTENDER" and naming Josephine M. CHENG, Jyh-Herng CHOW and Jian XU as inventors; 2. Application Ser. No. 09/324,499, entitled "METHOD AND APPARATUS FOR INDEXING STRUCTURED DOCUMENTS WITH RICH DATA TYPES" and naming Josephine M. CHENG, Jyh-Herng CHOW, Gene Y. C. FUH and Jian XU as inventors; and 3. Application Ser. No. 09/324,826, now U.S. Pat. No. 6,421,656 entitled "METHOD AND APPARATUS FOR CREATING STRUCTURE INDEXES FOR A DATABASE EXTENDER" and naming Josephine M. CHENG, Jyh-Herng CHOW, and Jian XU as inventors.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/3

US-CL-CURRENT: 707/3

FIELD-OF-SEARCH: 707/1, 707/2, 707/3, 707/4, 707/10, 707/100, 707/101, 707/104.1,
707/523, 709/219

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 5299123	March 1994	Wang et al.	707/2
<input type="checkbox"/> 5319779	June 1994	Chang et al.	707/3
<input type="checkbox"/> 5544355	August 1996	Chaudhuri et al.	707/2
<input type="checkbox"/> 5560007	September 1996	Thai	707/2
<input type="checkbox"/> 5590321	December 1996	Lin et al.	707/10
<input type="checkbox"/> 5644763	July 1997	Roy	707/101
<input type="checkbox"/> 5649023	July 1997	Barbara et al.	382/159
<input type="checkbox"/> 5659729	August 1997	Nielsen	707/3
<input type="checkbox"/> 5687362	November 1997	Bhargava et al.	707/2
<input type="checkbox"/> 5696964	December 1997	Cox et al.	707/5
<input type="checkbox"/> 5732262	March 1998	Gillespie et al.	707/102
<input type="checkbox"/> 5745745	April 1998	Tada et al.	707/1
<input type="checkbox"/> 5745754	April 1998	Lagarde et al.	707/104.1
<input type="checkbox"/> 5748188	May 1998	Hu et al.	345/853
<input type="checkbox"/> 5752017	May 1998	Bhargava et al.	707/2
<input type="checkbox"/> 5758145	May 1998	Bhargava et al.	707/2
<input type="checkbox"/> 5758356	May 1998	Hara et al.	707/202
<input type="checkbox"/> 5761493	June 1998	Blakeley et al.	707/4
<input type="checkbox"/> 5778353	July 1998	Schiefer et al.	707/2
<input type="checkbox"/> 5778367	July 1998	Wesinger, Jr. et al.	707/10
<input type="checkbox"/> 5784608	July 1998	Meske, Jr. et al.	707/2
<input type="checkbox"/> 5793966	August 1998	Amstein et al.	709/203
<input type="checkbox"/> 5796393	August 1998	MacNaughton et al.	345/733
<input type="checkbox"/> 5870549	February 1999	Bobo, II	709/206
<input type="checkbox"/> 6349302	February 2002	Aoyama et al.	707/101
<input type="checkbox"/> 6366934	April 2002	Cheng et al.	707/200
<input type="checkbox"/> 6421656	July 2002	Cheng et al.	707/2

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0 851 368	July 1998	EP	
WO 97/42584	November 1997	WO	

OTHER PUBLICATIONS

Jyh-Herng Chow et al. "An Extensible Architecture for Supporting Spatial Data in RDBMS" published in International Computer Symposium, pp. 93-102, Dec. 17-19, 1998.

IBM Technical Disclosure Bulletin "Multiple Indexed Access Path in a Relational Database System", vol. 32, No. 10B, Mar. 1990.

IBM Technical Disclosure Bulletin "Dynamic Structured Query Language Prepared Statement Cache", vol. 39, No. 02, Feb. 1996.

ART-UNIT: 2175

PRIMARY-EXAMINER: Mizrahi; Diane D.

ASSISTANT-EXAMINER: Mofiz; Apu M

ATTY-AGENT-FIRM: Sughrue Mion, PLLC

ABSTRACT:

An extender for a computer-implemented relational database system is disclosed for storing, querying, and retrieving structured documents. The extender provides a new abstract data type and includes a plurality of user defined functions for storing, querying, and retrieving structured documents internally, as character-based large objects (CLOB), or externally, in flat files or URLs, for example.

A method and apparatus using an extender having a "conditional select" functionality is further disclosed for querying structured documents. The "conditional select" functionality is based on user defined functions residing within the extender being applied to a projection in a structured query in the database system.

A method and apparatus using an extender having a set of user defined functions is further disclosed for creating one or more indexes for structured documents stored in the relational database system. The method uses the set of functions to create the indexes and uses already created B+ tree index structures implemented in the database system to support the indexes.

A method and apparatus using an extender is further disclosed for creating and supporting structure indexes. The method includes a tag counting system for indexing structured documents and for implementing the structure indexes within the relational database.

97 Claims, 13 Drawing figures



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L4: Entry 7 of 11

File: USPT

Jun 18, 2002

US-PAT-NO: 6408311

DOCUMENT-IDENTIFIER: US 6408311 B1

TITLE: Method for identifying UML objects in a repository with objects in XML content

DATE-ISSUED: June 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baisley; Donald Edward	Laguna Hills	CA		
Kumar; C. Suresh	Mission Viejo	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Unisys Corp.	Blue Bell	PA			02

APPL-NO: 09/ 345290 [PALM]

DATE FILED: June 30, 1999

PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATIONS This patent document relates to the following patent applications, assigned to the same assignee whereof, which are incorporated herein by reference. U.S. Pat. No. 6,289,501, issued on Sep. 11, 2001, entitled A METHOD AND SYSTEM FOR GENERATING A SIMPLE DOCUMENT TYPE DEFINITION FOR DATA INTERCHANGE AMONG SOFTWARE TOOLS; U.S. Pat. No. 6,253,366, issued Jun. 26, 2001, entitled A METHOD AND SYSTEM FOR GENERATING A COMPACT DOCUMENT TYPE DEFINITION FOR DATA INTERCHANGE AMONG SOFTWARE TOOLS; U.S. Ser. No. 09/282,230, currently pending filed Mar. 21, 1999, entitled A METHOD AND SYSTEM FOR GENERATING A HIERARCHIAL DOCUMENT TYPE DEFINITION FOR DATA INTERCHANGE AMONG SOFTWARE TOOLS; U.S. Pat. No. 6,292,932, issued on Sep. 18, 2001, entitled A SYSTEM AND METHOD FOR CONVERTING FROM ONE MODELING LANGUAGE TO ANOTHER; U.S. Ser. No. 09/345,289, filed on Jun. 30, 1999, entitled A META DATA DRIVEN SYSTEM AND METHOD FOR EFFECTING DATA INTERCHANGE AMONG SOFTWARE TOOLS IN A DISTRIBUTED ENVIRONMENT; and, U.S. Pat. No. 6,330,569, issued on Dec. 11, 2001, entitled A METHOD FOR VERSIONING A UML MODEL IN A REPOSITORY IN ACCORDANCE WITH AN UPDATED XML REPRESENTATION OF THE UML MODEL.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/203; 707/513, 703/25, 717/1

US-CL-CURRENT: 707/203; 703/25, 715/513, 717/100

FIELD-OF-SEARCH: 707/1, 707/203, 707/103, 707/522, 707/513, 717/1, 717/3, 395/705, 703/25

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	5978586	November 1999	Baisley et al.	395/705
<input type="checkbox"/>	6016574	January 2000	Chen	717/5
<input type="checkbox"/>	6128772	October 2000	Baisley	717/3
<input type="checkbox"/>	6167564	December 2000	Fontana et al.	717/1
<input type="checkbox"/>	6170081	January 2001	Fontana et al.	717/1
<input type="checkbox"/>	6199082	March 2001	Ferrel et al.	707/522
<input type="checkbox"/>	6199195	March 2001	Goodwin et al.	717/1
<input type="checkbox"/>	6253366	June 2001	Mutschler, III	717/1
<input type="checkbox"/>	6275787	August 2001	Baisley	703/21
<input type="checkbox"/>	6289501	September 2001	Mutschler, III	717/1
<input type="checkbox"/>	6292932	September 2001	Baisley et al.	717/1
<input type="checkbox"/>	6330569	November 2001	Baisley et al.	707/203
<input type="checkbox"/>	6343265	January 2002	Glebov et al.	703/25

ART-UNIT: 2175

PRIMARY-EXAMINER: Rones; Charles L.

ATTY-AGENT-FIRM: Kozak; Alfred W. Starr; Mark T. Rode; Lise A.

ABSTRACT:

In a computer system executing a repository program and having a memory, a method is disclosed for identifying UML objects in the repository with objects in an XML file. The method includes the steps of parsing the XML file into XML objects and building an object tree. Next, the object tree is traversed a first time, and for each XML object found that has a name, corresponding UML objects are identified. After this, the object tree is traversed a second time, and for each XML object found that does not have a name, corresponding UML objects are then identified through Compositions and References. The method for traversing said object tree a first time includes the steps of identifying a UML object type for each XML object, and when the XML object name matches the UML object name at the current level, a UML and XML object IDs are saved in a 'Conversion' object in the memory.

28 Claims, 16 Drawing figures



Generate Collection

Print

L2: Entry 1 of 3

File: USPT

Sep 16, 2003

US-PAT-NO: 6622144

DOCUMENT-IDENTIFIER: US 6622144 B1

TITLE: Methods and database for extending columns in a record

DATE-ISSUED: September 16, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rush, Jr.; Ronald A.	Columbia	SC		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
NCR Corporation	Dayton	OH			02

APPL-NO: 09/ 649698 [PALM]

DATE FILED: August 28, 2000

INT-CL: [07] G06 F 17/00, G06 F 7/00

US-CL-ISSUED: 707/101; 707/102, 707/100

US-CL-CURRENT: 707/101; 707/100, 707/102

FIELD-OF-SEARCH: 707/3, 707/6, 707/100, 707/102, 707/2, 707/4, 707/103, 707/101

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

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PAT-NO	ISSUE DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 5261098	November 1993	Katin et al.	395/650
<input type="checkbox"/> 5355493	October 1994	Silberbauer et al.	395/700
<input type="checkbox"/> 5745755	April 1998	Covey	395/619
<input type="checkbox"/> 5745889	April 1998	Burrows	707/2
<input type="checkbox"/> 5799310	August 1998	Anderson et al.	707/102
<input type="checkbox"/> 5826259	October 1998	Doktor	707/4
<input type="checkbox"/> 5832481	November 1998	Sheffield	707/4
<input type="checkbox"/> 5940818	August 1999	Malloy et al.	707/2
<input type="checkbox"/> 6016497	January 2000	Suver	707/103R
<input type="checkbox"/> 6069627	May 2000	Conrad et al.	345/866
<input type="checkbox"/> 6078925	June 2000	Anderson et al.	707/103R
<input type="checkbox"/> 6338056	January 2002	Dessloch et al.	707/2
<input type="checkbox"/> 6366934	April 2002	Cheng et al.	707/513
<input type="checkbox"/> 6405198	June 2002	Bitar et al.	707/6
<input type="checkbox"/> 6450955	September 2002	Brown et al.	600/300
<input type="checkbox"/> 6463440	October 2002	Hind et al.	707/102
<input type="checkbox"/> 6470343	October 2002	O'Brien et al.	707/100
<input type="checkbox"/> 6519597	February 2003	Cheng et al.	707/10

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
2325761	December 1998	GB	

ART-UNIT: 2171

PRIMARY-EXAMINER: Robinson; Greta

ASSISTANT-EXAMINER: Rayyan; Susan

ATTY-AGENT-FIRM: Schwegman, Lundberg, Woessner, Kluth

ABSTRACT:

Methods and a database for extending the columns of a record are provided. A record is provided having an extendible column wherein a tokenized string may be stored. Moreover, the tokenized string includes one or more tags, each tag logically representing an extendible column to associate with the record. Further, at least a portion of the tokenized string is delivered upon a request. The tokenized string may conform to at least one of XML, HTML, and SGML. Moreover, updates to the record occur without modifying a table definition associated with the record.

20 Claims, 5 Drawing figures